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10/527,579	03/11/2005	Andreas Loew	PD020089	7288

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EXAMINER	
REINIER, BARBARA DIANE	
ART UNIT	PAPER NUMBER
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,579	LOEW, ANDREAS	
	Examiner	Art Unit	
	Barbara D. Reinier	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Claim 15 is objected to because of the following informalities:

Claim 15 line 5: the first occurrence of "color" should be plural "colors".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 15 rejected under 35 U.S.C. 102(b) as being anticipated by Oh (US 2001/0008428).

Regarding claim 15: Oh teaches an apparatus for correcting color video signals **(device, Abstract)** comprising: a matrix through which the color video signals pass **(color space converter produces the `1.times.n` R, G, B signals displayable on a monitor by using the `n.times.n` tint considered coefficients from the tint controller and the color space signals, paragraph 10)** to control the proportions of three primary colors in matrixed color value signals **(RGB)**, as a function of hue of the color video signals respectively **(tint, paragraph 10 & 17)**, and controlling the matrix as

a function of color saturation **(chrominance CbCr sine theta and cosine theta values, paragraph 17)** wherein the matrix comprises nine multipliers **(3-11 of Figure 2)** and three adders **(12-14 of Figure 2)** wherein three of the nine multipliers are connected to one adder respectively **(Figure 2)**.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 16-21, 26-29, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh (2001/0008428) in view of Kamaga (4,962,418).

Regarding claim 16: Oh teaches the correction values are a function of the hue **(tint)** of the color video signals **(paragraphs 10 & 17)**.

Oh does not explicitly teach having memory for storing coefficients of the matrix.

Kamaga teaches having a memory **(ROM, col. 2 lines 7-8 & col. 3 lines 20-22)** for storing coefficients of the matrix as a function of the hue **(chromaticity, col. 3 lines 39-41)**.

Oh and Kamaga are combinable because they are from the same field of endeavor of video signal correction ("…*correcting the picture signals on the basis of the correction values to obtain corrected picture signals to be fed to the displaying means*

for displaying a corrected picture." Kamaga col. 2 lines 3-6).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have incorporated the memory for coefficient storage as taught by Kamaga with the video correction system as taught by Oh.

The motivation to do so would to allow for updated and previously determined image characteristics to be maintained and stored ("*...measured values are sent to the signal processor 8 and the predetermined characteristics such as ideal chromaticity and reference white chromaticity of the ideal luminous bodies of the ideal display are separately fed to the signal processor. In the signal processor, the elements P.sub.ij and the gamma characteristics are obtained as the correction values, as described above, and are then stored in the ROM.*" Kamaga col. 7 lines 43-51).

Therefore, it would have been obvious to combine Oh and Kamaga to obtain the invention as specified in claim 16.

Regarding claim 17: Oh teaches the correction values are a function of the hue **(tint)** of the color video signals **(paragraphs 10 & 17)**.

Oh does not explicitly teach having memory for storing correction coefficients of the matrix.

Kamaga teaches having a memory **(ROM, col. 2 lines 7-8 & col. 3 lines 20-22)** for storing correction coefficients of the matrix as a function of the hue **(chromaticity, col. 3 lines 39-41 & col. 7 lines 48-51)**.

Oh and Kamaga are combinable because they are from the same field of

endeavor of video signal correction ("…*correcting the picture signals on the basis of the correction values to obtain corrected picture signals to be fed to the displaying means for displaying a corrected picture*." Kamaga col. 2 lines 3-6).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have incorporated the memory for coefficient storage as taught by Kamaga with the video correction system as taught by Oh.

The motivation to do so would to allow for updated and previously determined image characteristics to be maintained and stored ("…*measured values are sent to the signal processor 8 and the predetermined characteristics such as ideal chromaticity and reference white chromaticity of the ideal luminous bodies of the ideal display are separately fed to the signal processor. In the signal processor, the elements P.sub.ij and the gamma characteristics are obtained as the correction values, as described above, and are then stored in the ROM.*" Kamaga col. 7 lines 43-51).

Therefore, it would have been obvious to combine Oh and Kamaga to obtain the invention as specified in claim 17.

Regarding claims 18 and 19: Oh teaches a converter **(Tint controller of Figure 1)** for generating a hue signal **(tint, paragraph 21)** from the color video signals **(rotatory translation of Cb and Cr, paragraph 21)**.

Oh does not teach where the hue signal connected to input of the memories.

Kamaga teaches having a memory **(ROM, col. 2 lines 7-8 & col. 3 lines 20-22)** for storing correction coefficients of the matrix as a function of the hue **(chromaticity, col. 3 lines 39-41 & col. 7 lines 48-51)**.

Oh and Kamaga are combinable because they are from the same field of endeavor of video signal correction ("*...correcting the picture signals on the basis of the correction values to obtain corrected picture signals to be fed to the displaying means for displaying a corrected picture*." Kamaga col. 2 lines 3-6).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have incorporated the memory for coefficient storage as taught by Kamaga with the video correction system as taught by Oh.

The motivation to do so would to allow for updated and previously determined image characteristics to be maintained and stored ("*...measured values are sent to the signal processor 8 and the predetermined characteristics such as ideal chromaticity and reference white chromaticity of the ideal luminous bodies of the ideal display are separately fed to the signal processor. In the signal processor, the elements P.sub.ij and the gamma characteristics are obtained as the correction values, as described above, and are then stored in the ROM.*" Kamaga col. 7 lines 43-51).

Therefore, it would have been obvious to combine Oh and Kamaga to obtain the invention as specified in claims 18 and 19.

Regarding claims 20 and 21: Oh teaches a converter generates a color saturation signal **(256 is multiplied to both sin theta and cos theta variables, paragraph 26)**

supplied to multipliers located in the supply lines of the correction values to the matrix **(located in the Tint controller [Figure 3] that is upstream from the CSC controller as shown in Figure 1)**.

Regarding claims 26, 27, 33 and 34: Oh does not explicitly teach having memory for storing correction coefficients of the matrix.

Kamaga teaches having one of the memories supplies a correction coefficient to a respective of the multipliers **(col. 7 lines 20-31)**.

Oh and Kamaga are combinable because they are from the same field of endeavor of video signal correction ("…*correcting the picture signals on the basis of the correction values to obtain corrected picture signals to be fed to the displaying means for displaying a corrected picture*." Kamaga col. 2 lines 3-6).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have incorporated the memory for coefficient storage as taught by Kamaga with the video correction system as taught by Oh.

The motivation to do so would allow for updated and previously determined image characteristics to be maintained and stored ("…*measured values are sent to the signal processor 8 and the predetermined characteristics such as ideal chromaticity and reference white chromaticity of the ideal luminous bodies of the ideal display are separately fed to the signal processor. In the signal processor, the elements P.sub.ij and the gamma characteristics are obtained as the correction values, as described above, and are then stored in the ROM.*" Kamaga col. 7 lines 43-51).

Therefore, it would have been obvious to combine Oh and Kamaga to obtain the invention as specified in claims 26, 27, 33 and 34.

Regarding claim 28: Oh does not explicitly teach having memory for storing correction coefficients of the matrix.

Kamaga teaches a computer **(signal processor, col. 7 lines 39-41)** for loading the correction values into the memories **(col. 7 lines 49-51)**, and in the means for controlling the matrix having a program on a computer readable medium for setting the correction values.

The examiner concludes it is inherent that a program on a computer readable medium is being used to control the signal processor that is controlling the correction values being stored or retrieved in Kamaga's system.

Regarding claim 29: Oh teaches where the device permits the manual **(user control)** setting of the correction values **(ability of user to set preferred appearance features [correction values] of hue, saturation, contrast etc., paragraph 4)**.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oh (2001/0008428) in view of Kamaga (4,962,418) and in further view of Bestmann (US 6,433,898).

Regarding claim 32: Oh does not expressly teach the details of the analog input/output.

Kamaga teaches having an analog **(RGB)** input to the nine multipliers and an analog **(RGB)** output from the three adders **(Figure 6)**.

Bestmann teaches using logarithmizers connected upstream of the matrix **(col. 2 lines 23-27 & col. 6 lines 41-44)** and delogarithmizers are connected downstream of the matrix **(col. 2 lines 30-31 & col. 7 lines 64-67)**.

Oh, Kamaga and Bestmann are combinable because they are from the field of endeavor in image processing ("Electronic image processing is composed essentially of the steps of image input, image processing and image output." Bestmann col. 1lines 11-13).

At the time of the invention, it would be obvious to one of ordinary skill in the art to refine the image correcting capabilities as taught by Oh and Kamaga by including the logarithmic compensation for density as taught by Bestmann.

The motivation to do so would to allow for compensating for various film densities to be taken into consideration when processing the image for output (Bestmann col. 6 lines 33-67 – col. 7 lines 1-67).

Therefore, it would have been obvious to combine Oh, Kamaga and Bestmann to obtain the invention as specified in claim 32.

7. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh (2001/0008428) in view of Kamaga (4,962,418) and in further view of Cooper et al (US 6,477,271).

Regarding claims 22-25: Oh teaches providing color value signals **(color space for processing the color signals using YCbCr, paragraph 18)**.

Kamaga teaches providing color value signals **(RGB as shown in Figure 6)**.

Neither Oh or Kamaga explicitly teach color space conversion.

Cooper teaches a color space converter able to convert from an RGB to YCbCr color space as well as converting to an HSL (hue and saturation) color space before further processing **(col. 11 lines 66-67 – col. 12 lines 1-29)**.

Oh, Kamaga and Cooper are combinable because they are from the field of endeavor in image processing ("*…performing secondary color modification described herein may be implemented using software, hardware, firmware, or any combination thereof...*" Cooper col. 4 lines 26-27).

At the time of the invention, it would be obvious to one of ordinary skill in the art to refine the image correcting capabilities as taught by Oh and Kamaga by including the color space conversions as taught by Cooper.

The motivation to do so would to allow for flexibility of input video signal formats ("*If the received chromas are of a color space different than the chroma plane for which the chroma matcher determines chroma parameters, then the chromas may initially be converted to the chroma plane of the color matcher.*" Cooper col. 11 lines 63-66).

Therefore, it would have been obvious to combine Oh, Kamaga and Cooper to obtain the invention as specified in claims 22-25.

Response to Arguments

8. Applicant's arguments with respect to claims 15-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara D. Reinier whose telephone number is (571)270-5082. The examiner can normally be reached on M-Th, 8am-430pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Haskins L. Twyler can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/ Barbara D Reinier

Supervisory Patent Examiner, Art Unit 2625

Examiner
Art Unit 2625

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